

Warm-up!

Graph:

$$f(x) = x^2 + 2x - 3$$

$$V(-1, -4) \quad -\frac{2}{2}$$

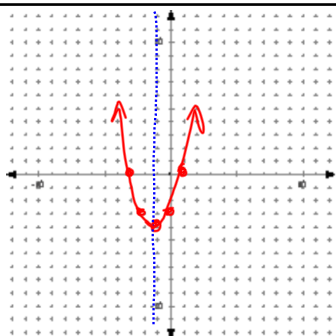
$$\text{a.o.s. } x = -1$$

$$\text{y-int } (0, -3)$$

$$\text{mirrored pt } (-2, -3)$$

$$\text{another pt } (1, 0)$$

$$\text{mirrored pt } (-3, 0)$$



x-intercepts

$$(-3, 0) (1, 0)$$

Solving Quadratic
Equations by:
6.2 graphing
6.3 factoring

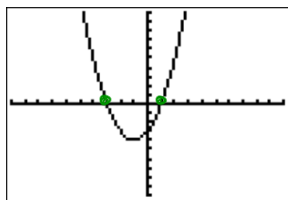
ex 1:

Solve by factoring

$$x^2 + 2x - 3 = 0$$

$$(x - 1)(x + 3) = 0$$

$$x = 1 \quad x = -3$$



Roots
equations

Zeros
functions

x-intercepts
graphs of functions

ex 2:

Solve

$$-x^2 - 6x - 9 = 0$$

$$x^2 + 6x + 9 = 0$$

$$(x+3)^2 = 0$$

$$x = -3$$

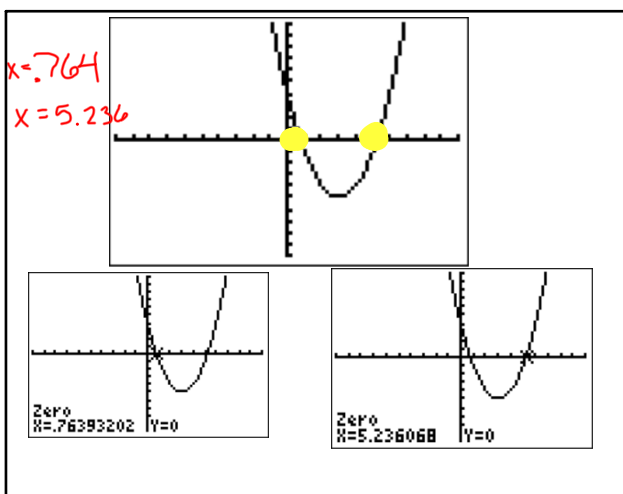
$$\{-3\}$$

ex 3:

Solve

$$x^2 - 6x + 4 = 0$$

prime
irrational

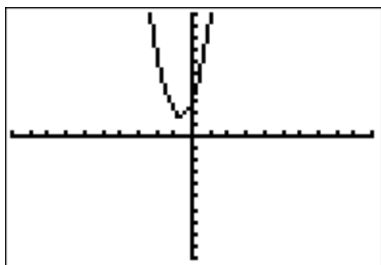


ex 4:

Solve

$$3x^2 + 4x + 3 = 0$$

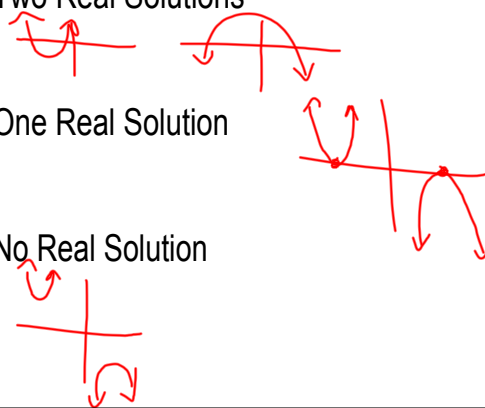
No Real roots



Two Real Solutions

One Real Solution

No Real Solution

**HW**

p298 32, 36 (Use calc)

p304 14-23, 32 **FACTORING**